

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 16-38 were pending when examined. Non-elected claims 16-26 are withdrawn from consideration by the Examiner.

Claim 27 is amended to delete “dendrites.” Thus, the metal powder is in the form of “scales”.

Claim 33 is also amended to recite that the metal powder “is in the form of scales”. Thus, the process of claim 33 uses a flux comprising metal powder in the form of scales of which constituting elements are comprised of cores and coatings around the cores. Support for the amendment can be found in paragraph [0026] of the specification.

New claim 39 recites “The soldering process according to claim 33 wherein the cores are made of tin and the coatings are made of silver.” Support for claim 39 can be found in paragraph [0027] of the specification.

I. Claim Rejections Under 35 U.S.C. § 103

The Examiner rejects claims 33-38 under 35 U.S.C. § 103(a) as being unpatentable over Maeda et al. (US 6,189,771) in view of Imamura et al. (US 2002/0185309). The Examiner also rejects claims 27-32 under 35 U.S.C. § 103(a) as being unpatentable over Maeda et al. in view of Imamura et al., and further in view of Sugimoto et al. (JP 05-212579). As applied to the amended claims, Applicants respectfully traverse the rejections.

On page 4 of the Office Action, the Examiner acknowledges that Maeda et al. and Imamura et al. do not teach the metal powder in the form of scales or dendrites. The Examiner asserts that Sugimoto et al. teach a method of forming a conductive paste, solder, including a metal powder having a **dendritic shape**.

Claim 27 is amended to recite that “the metal powder is in the form of **scales**”. Sugimoto et al. do not teach or suggest that the metal powder is in the form of scales, as recited in claim 27. Therefore, claim 27 would not have been obvious over the references.

Moreover, as acknowledged by the Examiner, the Imamura et al. reference discloses that the metal powder of the flux is in the **spherical form**, and thus does not teach or suggest any other type of form of the metal powder (see Office Action, page 3, lines 13-15, and page 6, lines 3-5, and see paragraph [0070] of the reference). The spherical form is essential in the reference, because the metal power must easily move when the solder bumps are pressed by the connection terminals (see paragraph [0070] of the reference).

Thus, one of ordinary skill in the art would understand that if the metal powder disclosed in the Imamura et al. reference were in scale form, then the metal powder would not easily move. **Therefore, the reference teaches away from “the metal powder is in the form of scales”, as recited in claim 27.**

Accordingly, claim 27 would not have been obvious over the references.

Claim 33 is also amended to recite that the metal powder is in the form of scales. **As acknowledged by the Examiner, Maeda et al. and Imamura et al. do not teach or suggest the metal powder in the form of scales.**

Moreover, as discussed above, the Imamura et al. reference teaches away from metal powder in the form of scales.

Therefore, the references do not teach or suggest the process of claim 33. Therefore, claim 33 would not have been obvious over the references.

In addition, claim 33 recites “a flux comprising...a metal powder of which constituting elements are **comprised of cores and coatings around the cores**, wherein the coatings are made of a metal which has a metal point higher than that of a solder material which forms the solder portion”.

The Examiner asserts that Imamura’s grains are reasonably taken to be “cores and coatings around the cores”, and that there is no claim limitation that the coating must be visibly distinct from or a different material than the core (see Office Action, page 3, lines 13-19).

Claim 39 recites that the **cores are made of tin** and the **coatings are made of silver**. Accordingly, the claim explicitly states that the core and coating are made from different materials.

In view of the foregoing, claims 27 and 33 would not have been obvious over the references. Claims 28-32 and 34-38, and new claim 39, depend from claim 27 or 33, and thus also would not have been obvious over the references.

II. Conclusion

For these reasons, Applicants take the position that the present claims are clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejections set forth by the Examiner have been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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